



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **2001154190 A**(43) Date of publication of application: **08.06.01**

(51) Int. Cl.

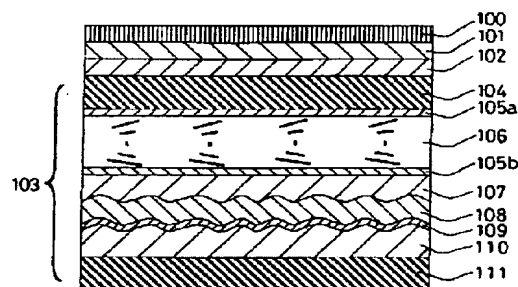
G02F 1/1335**G02B 5/08****G02F 1/133**(21) Application number: **11339740**(22) Date of filing: **30.11.99**(71) Applicant: **MATSUSHITA ELECTRIC IND CO LTD**(72) Inventor: **FUJITA SHINGO
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OGAWA TETSU****(54) REFLECTION TYPE COLOR LIQUID CRYSTAL DISPLAY DEVICE****(57) Abstract:**

PROBLEM TO BE SOLVED: To decrease the lowering of a voltage applied to a liquid crystal layer between transparent electrodes corresponding to the distance from the power supply terminal by reducing the influence of the parasitic electric load capacitance through the lower transparent electrode and a metal reflection layer on the under side, and to obtain optical characteristics with excellent uniformity of reflection brightness in the display plane.

SOLUTION: A liquid crystal layer 106 is held between transparent electrodes 105a, 105b formed on an upper transparent substrate 104 and a lower substrate 111 disposed facing each other, respectively, and a polarizing plate 100, phase difference plates 101, 102, and a reflection layer 109 are disposed to constitute the display device. A rugged layer 110, reflection layer 109, color filter layer 108, flattening layer 107 and transparent electrode layer 105b are laminated in this order on the lower substrate. The electric capacitance between the reflection face of the reflection layer and the transparent electrode layer 105b is specified to

twice or smaller than the electric capacitance of the liquid crystal layer of the same area when no electric field is applied.

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100 偏光板
101 位相差板 (1)
102 位相差板 (2)
103 液晶セル
104 上側透明基板
105a 上側透明電極
105b 下側透明電極
106 液晶層
107 平坦化層
108 カラーフィルタ層
109 反射層
110 凹凸層
111 下側基板